

REPORT ON BOILERS.

No. 64917

Received at London Office

15 JAN 1942

Date of writing Report

19

When handed in at Local Office

12. 1.

1942

Port of

Glasgow

No. in
Reg. Book.

Survey held at

Glasgow

Date, First Survey

3. 10. 40

Last Survey

5. 1.

1942

38803. on the

S.S. "Umaria"

(Number of Visits 49)

Gross

6852

Tons

Net 4004

Master

Built at

Glasgow

By whom built

Barclay Curle & Co Ltd

Yard No. 684

When built

Engines made at

Glasgow

By whom made

Barclay Curle & Co Ltd

Engine No. 684

When made

Boilers made at

do

By whom made

do

Boiler No. do

When made

Nominal Horse Power

630

Owners

British India Steam Navigation Co Ltd

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Cochrane Ltd.

(Letter for Record

S

Total Heating Surface of Boilers

8344 sq ft

Is forced draught fitted

Y/N

Coal or Oil fired

coal

No. and Description of Boilers

4 Single Ended

Working Pressure

250 lb

Tested by hydraulic pressure to

425 lb

Date of test

25. 9. 41

No. of Certificate

20843

Can each boiler be worked separately

Y/N

Area of Firegrate in each Boiler

52 sq ft

No. and Description of safety valves to each boiler

2 Improved Safety LIFT

Area of each set of valves per boiler

per Rule 4. 7. 0

as fitted

6. 28 sq ft

Pressure to which they are adjusted

250 lb

Are they fitted with easing gear

Y/N

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Y

Smallest distance between boilers or uptakes and bunkers or woodwork

null blank

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

14' 0"

Length

11' 6"

Shell plates: Material

S

Tensile strength

29. 33 Tons

Thickness

1 3/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

D.R. 5/16"

long. seams

DBS. TR

Diameter of rivet holes in

circ. seams 1 1/4"

long. seams 1 1/4"

Pitch of rivets

4. 09"

Percentage of strength of circ. end seams

plate

61.7

rivets

48.3

Percentage of strength of circ. intermediate seam

plate

85.4

rivets

86.0

Percentage of strength of longitudinal joint

plate

85.4

rivets

86.0

combined

Working pressure of shell by Rules

Thickness of butt straps

outer 3/16"

inner 1/16"

No. and Description of Furnaces in each Boiler

3 Dugton

Material

S

Tensile strength

26. 30 Tons

Smallest outside diameter

41 1/4"

Length of plain part

top

bottom

Thickness of plates

crown 23"

bottom 31"

Description of longitudinal joint

weld

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

End plates in steam space: Material

S

Tensile strength

26. 30 Tons

Thickness

1 29/64"

Pitch of stays

18 1/2" x 21"

How are stays secured

double into

Working pressure by Rules

Tube plates: Material

front

back

S

Tensile strength

26. 30 Tons

Thickness

1 31/32"

Mean pitch of stay tubes in nests

9. 45"

Pitch across wide water spaces

14"

Working pressure

front

back

Girders to combustion chamber tops: Material

S

Tensile strength

28. 32 Tons

Depth and thickness of girder

at centre

2 @ 10 3/4" x 2 1/8"

Length as per Rule

38 25/32"

Distance apart

6 5/8" x 7 3/4"

No. and pitch of stays

in each

3 @ 9 1/2"

Working pressure by Rules

Combustion chamber plates: Material

S

Tensile strength

26. 30 Tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

7/8"

Pitch of stays to ditto: Sides

8 1/4" x 9 1/2"

Back

8 1/4" x 9 1/2"

Top

9 1/2" x 7 3/4"

Are stays fitted with nuts or riveted over

into

Working pressure by Rules

Front plate at bottom: Material

S

Tensile strength

26. 30 Tons

Thickness

1"

Lower back plate: Material

S

Tensile strength

26. 30 Tons

Thickness

29/32"

Pitch of stays at wide water space

14"

Are stays fitted with nuts or riveted over

into

Working Pressure

Main stays: Material

S

Tensile strength

28. 32 Tons

Diameter

At body of stay, or Over threads

3 5/8"

No. of threads per inch

6

Area supported by each stay

Working pressure by Rules

Screw stays: Material

S

Tensile strength

26. 30 Tons

Diameter

At turned off part, or Over threads

1 1/8"

No. of threads per inch

9

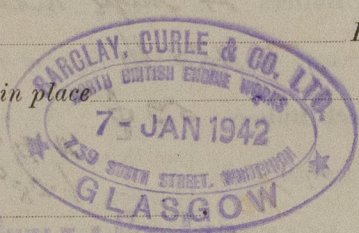
Area supported by each stay

Lloyd's Register Foundation

W226-0248

Working pressure by Rules
No. of threads per inch 9
Tubes: Material 3
Pitch of tubes 4 1/2 x 4 1/4
shell plate 21 x 7
Outer row rivet pitch at ends 10 3/4
Tensile strength
Diameter of rivet holes
Internal diameter
stays
How connected to shell
of rivets in outer row in dome connection to shell
Are the stays drilled at the outer ends No.
Margin stays: Diameter { At turned off part, 2
or Over threads 2
Area supported by each stay
External diameter { Plain 3
Stay 3
Thickness { 3/8 8/16 1/2
Working pressure by Rules
Section of compensating ring 13 x 1 3/4
Depth of flange if manhole flanged 4 3/8
No. of rivets and diameter of rivet holes 40 2 1/8
Manhole compensation: Size of opening in
Steam Dome: Material Iron
Description of longitudinal joint
Percentage of strength of joint { Plate
Rivets
Thickness of crown
No. and diameter of
Working pressure by Rules
Inner radius of crown
Working pressure by Rules
Size of doubling plate under dome
Diameter of rivet holes and pitch

Type of Superheater
Number of elements
Material of headers
the boiler be worked separately
Area of each safety valve
Rules
tubes
valves fitted to free the superheater from water where necessary
Material of tubes
Tensile strength
Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Are the safety valves fitted with easing gear
Pressure to which the safety valves are adjusted
forgings and castings
Internal diameter and thickness of tubes
Thickness
Can the superheater be shut off and
Working pressure as per
Hydraulic test pressure:
Are drain cocks or
Manufacturers of { Tubes
Steel forgings
Steel castings



Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,
Alexander Macneil
Manufacturer.

Dates of Survey { During progress of work in shops - -
while building { During erection on board vessel - - -
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
SEE ACCOMPANYING MACHINERY REPORT.
Total No. of visits

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
These boilers have been built under special Survey & in accordance with the Rules
The materials & workmanship are good
The safety valves have been adjusted. The boiler examined under steam and found
in order.

Survey Fee ...
Travelling Expenses (if any) £
When applied for, 19
When received, 19

Per A.T. Brown & P. Gibbeson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 13 JAN 1942
Assigned SEE ACCOMPANYING MACHINERY REPORT.

